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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/535,494

11/07/2005

Hirokazu Ooe

2936-0243PUS1

3946

2292 7590 02/24/2009
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EXAMINER

MENDEZ, ZULMARIAM

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

02/24/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/535,494	Applicant(s) OOE ET AL.	
	Examiner ZULMARIAM MENDEZ	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/14/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/28/2007; 09/28/2005; 05/18/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 2-4 are rejected under 35 U.S.C. 102(e), as being anticipated by Mae et al. (US Patent Application Publication no. 2004/0144136).

With regard to claim 2, Mae discloses an electric washing machine with water treatment means that includes a pair of electrodes for electrolysis of the tap water and is adapted to produce the cleaning liquid by electrolyzing the tap water through energization of the pair of electrodes (33; page 1, paragraphs 3 and 5), comprising terminals (84, page 6, paragraph 72; figures 3-4) that are so laid as to run from the electrodes (33) out of a casing of the chamber (32), the terminals (84) being disposed on an upstream side/water inlet (35) with respect to a water current flowing through an inside of the casing (32; figures 3 and 4).

With regard to claim 3, Mae discloses an electric washing machine with water treatment means that includes a pair of electrodes for electrolysis of the tap water and is adapted to produce the cleaning liquid by electrolyzing the tap water through

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energization of the pair of electrodes (33; page 1, paragraphs 3 and 5), comprising terminals (84, page 6, paragraph 72; figures 3-4) that are so laid as to run from the electrodes (33) out of a casing of the chamber (32), the terminals (84) being disposed on an upstream side/water inlet (35) with respect to a water current flowing through an inside of the casing (32; figures 3 and 4); and a supporting portion (80, 85) for supporting downstream-side parts/outflow port (34) of the electrodes (33) being formed on an inner surface of the casing (32).

With regard to claim 4, Mae discloses an electric washing machine with water treatment means that includes a pair of electrodes for electrolysis of the tap water and is adapted to produce the cleaning liquid by electrolyzing the tap water through energization of the pair of electrodes (33; page 1, paragraphs 3 and 5), comprising terminals (84, page 6, paragraph 72; figures 3-4); the terminals (84) laid from the electrodes (33) being so formed as to penetrate a bottom wall of a casing (32; see figure 4) and protrude downwards (page 6, paragraph 72).

3. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by King et al. (US Patent Application Publication no. 2004/0108261).

With regard to claim 5, King discloses a dispensing apparatus and method for controlled treatment of fluids and in particular water used for drinking and work among others (page 1, paragraph 4) wherein a cross sectional area in the dispenser outlet is substantially larger than a cross sectional flow area in the inlet (see claim 6).

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4. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Hayes et al. (US Patent no. 4,525,253).

With regard to claim 7, Hayes discloses an electrical water purification apparatus (col. 1, lines 10-14) generating metal ions by applying a voltage between electrodes (col. 2, lines 1-22), comprising: a water inflow port (58) and a water outflow port (60) formed in a casing of the device (56), wherein the water outflow port (60) is located in a lowest position within an interior space of the casing (see figure 5; col. 4, lines 48-56).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 8, 9, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiyama (JP 2002-263649).

- **A preliminary translation of Nishiyama (JP 2002-263649) and Miyazaki (JP 2001-276828) was obtained from the JPO site:**
http://dossier.ipdl.inpit.go.jp/text_trans.html. A full English translation has been requested by the examiner and will be forwarded to the applicant in a separate communication as soon as it is received.*

With regard to claims 1, 8, 9, 11 and 13, Nishiyama discloses a method and apparatus for giving a sterilization function to water to be used for kitchen service water, bathtub, and washing service water, among others (page 2, paragraphs 2-3) by energizing electricity to silver electrodes (page 4, paragraph 9; page 8, paragraph 22). Even though Nishiyama fails to explicitly disclose wherein an interval between the electrodes becomes narrower, from an upstream side/input to a downstream side/output, with respect to a water current flowing through an inside a casing of the ion elution unit, Nishiyama does disclose wherein the silver electrodes may be arranged in such a manner that the electrode spacing (inter-electrode distance) at one side may be larger than at the other side in order to increase production efficiency of complex ion (page 19, paragraph 25). Therefore, one having ordinary skill in the art at the time of the invention would have found it obvious to modify the inter-electrode distance in the ion generating device, as taught by Nishiyama, in order to increase production efficiency of complex ion.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mae et al. (US Patent Application Publication no. 2004/0144136).

With regard to claim 6, Mae discloses an electric washing machine with water treatment means that includes a pair of electrodes for electrolysis of the tap water and is adapted to produce the cleaning liquid by electrolyzing the tap water through energization of the pair of electrodes (33; page 1, paragraphs 3 and 5) but fails to explicitly teach wherein a cross sectional area of the device gradually decreases from an upstream (water inlet) to a downstream (water outlet) side. However, Mae does disclose modifying the size of the housing of the water treatment unit in order to achieve space saving as well as to facilitate the water flow throughout the system (page 7, paragraphs 85 and 88). Therefore, one having ordinary skill in the art would have found it obvious to modify the shape of the device, as taught by Mae, in order to achieve space saving as well as to facilitate the water flow throughout the system. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

9. Claims 10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiyama, as applied to claim 9 above, in view of Miyazaki (JP 2001-276828).

With regard to claims 10, 12 and 14, Nishiyama discloses all of the features, as disclosed to claim 9 above, but fails to teach wherein polarities of the electrodes are reversed periodically. however, Miyazaki discloses an electrolysis disinfection method and apparatus of water which is used for disinfecting wash water, such as Poole as well as for drinking water, among others (page 1, paragraph 1) wherein the electrolysis

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disinfection equipment consists of the a first electrolytic device which generates complex ions by energizing a first set of silver or copper electrodes (page 3, paragraphs 8-10) wherein a phase inversion is carried out between the electrodes in order to disinfect or eliminate undesired materials that have been deposited on the electrodes during processing (page 5, paragraphs 14-17). Therefore, one having ordinary skill in the art at the time of the invention would have found it obvious to reverse the polarities of the electrodes, as taught by Miyazaki, in the apparatus of Nishiyama, in order to disinfect or eliminate undesired materials that have been deposited on the electrodes during processing.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZULMARIAM MENDEZ whose telephone number is (571)272-9805. The examiner can normally be reached on Monday-Friday from 9am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa D. Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HARRY D WILKINS III/
Primary Examiner, Art Unit

/Z. M./
Examiner, Art Unit